

● PRINTER RUSH ●
(PTO ASSISTANCE)

Application : <u>10/017185</u>	Examiner : <u>Howell</u>	GAU : <u>3722</u>
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<input type="checkbox"/> IDS	_____	<input type="checkbox"/> Foreign Priority
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[RUSH] MESSAGE: Please provide missing data on page 10,
line 11 and page 50, line 14 of the specification.

Thank you.

[XRUSH] RESPONSE: Corrected

William Cunningham 314-238-2400

INITIALS: PS

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It has been known that if the outer face of the cover of such perfect bound books was covered or laminated with a clear plastic film, such covers were more durable and would protect the cover from water damage and hard use. However, because only the outer face of the cover was so laminated, these covers had a tendency to curl up away from the book block. It was known that if both the inner and outer faces of the cover were so laminated, such cover curling could be reduced or eliminated. However, if the inner face of the cover was so laminated, it was difficult for the adhesive to bind the cover to the spine of the book block.

In recent years, it has been advantageous to print such perfect bound books on demand. Apparatus for printing, binding and trimming such print on demand (POD) books is disclosed in my co-pending U. S. Patent Provisional Application Nos. 60/254,106, filed December 8, 2000, and U. S. Provisional Patent Application No. 60/281,524 filed April 4, 2001, now U. S. Patent Non-Provisional Application No. 10/020,266, filed Dec 7, 2001, which are herewith incorporated by reference. As disclosed in this co-pending application, such POD books may be of different sizes and thicknesses with a limited range (e.g., any size between 5 inches x 7 inches to 8 1/2 inches x 11 inches, and thicknesses from about 25 pages to 1000 or more pages). Reference may also be made to my U. S. Patent 6,193,458 for apparatus and methods for binding and trimming perfect bound book. Reference may also be made to my U. S. Patent 6,142,721 which discloses a system and method for perfect binding a

center portion of the cover in accordance with this invention wherein portions of the inner lamination proximate the slits or cuts or punctures formed therein upon conditioning of the inner lamination are raised or pulled up from the surface of the inner lamination and where substantially no indentation or other marks are
5 formed on the outer surface of the cover or on the outer lamination;

Figs. 5 – 13 correspond to Figs. 1 – 9 of U. S. Patent 6,193,458 and the reference characters of Figs. 5 – 13 correspond to Figs. 1 – 9 of said U. S. Patent 6,193,458;

Figs 14 – 25 correspond to Figs. 13 – 24 of U. S. Provisional Patent No. 60/281,524, filed April 4, 2001, now U. S. Non-Provisional Patent Application No. 10 60/281,524, filed 12/7/01, 2001, and the reference characters of Figs. 14 – 25 correspond to the reference characters of Figs. 13 – 24 of the last-mentioned U.S. Provisional Patent Application No. 60/281,524;

Fig. 26 is a top plan view of apparatus of the present invention (referred to
15 as a lamination station) for double laminating a cover for an on demand printed book, with Fig. 26 corresponding generally to Fig. 15, but having a cover lamination station in line with a conveyor or mechanism for transporting a cover printed by a cover printer to the lamination station for having the outer and inner laminations adhered to the inner and outer faces of the cover and illustrating a
20 cover conditioning station for conditioning a center portion of the inner face of the inner lamination to be adhered by the adhesive to the spine of the book block,

accurately position the cover at the binding station such that the center portion CP of the cover is in register with spine of a book block BB carried by carriage 7. Thus, upon actuation of the clamp 35 at the binding station BS, the cover C will be drawn up on the spine S and will be tightly wrapped around the spine such that the adhesive carried by the spine will engage the roughened (scarified) center portion CP of the inner lamination IL adhered to the cover C. As noted the adhesive will thus effectively mechanically bond to the roughened film and will result in a perfect bound book with a double laminated cover with the book block/cover bond having a strength generally the same as or better than the bond between the book block and a non-laminated cover.

The control system for controlling operation of the printing, binding and trimming apparatus, as shown generally in Figs. 14 – 25, is described in the aforementioned U. S. Provisional Patent Application No. 60/281,524, now U. S. Non-Provisional Patent Application No. 10/020,866, filed December 7, 2001, which is herein incorporated by reference. In brief, this control system includes a binder/trimmer controller CONT 1, as shown in Fig. 32. CONT 1 is preferably a programmable controller, such as an AT6400 controller, as described in the aforementioned U. S. Patent 6,193,458 and as illustrated in Fig. 12 thereof. The controller CONT 1 for the printing, binding and trimming apparatus, as shown in Figs. 14 – 25, in turn controls operation of the black and white printer 110 via a controller CONT 2 and of operation of black and white printer 200 via a controller